

AMENDMENT TO THE CLAIMS:

The listing of claims below is a complete listing of claims in this reissue application:

Listing of claims:

Claim 1 (original): A video display apparatus with an on-screen display pivoting function, comprising:

an on-screen display (OSD) generating section for receiving horizontal/vertical synchronizing signals and clock signals, and for outputting first video signals in response to OSD control signals;

a pivot circuit section for receiving the first video signals, for storing in a position-converting manner a write address of the first video signals in correspondence with a pre-set pivot write address, and for converting the write address in response to the horizontal/vertical synchronizing signals and the clock signals so as to output the first video signals in the form of second video signals;

a scale converting section for furnishing the horizontal/vertical synchronizing signals and the clock signals to said OSD generating section and said pivot circuit section, respectively, and for receiving the second video signals so as to convert scales of the second video signals in response to scale control signals; and

a control section for furnishing the OSD control signals and the scale control signals to said OSD generating section and said scale converting section, respectively, in response to OSD driving signals, and for furnishing pivot control signals to said pivot control section in response to mode control signals generated by a user.

Claim 2 (original): The video display apparatus as claimed in claim 1, wherein said pivot circuit section comprises:

an R-pivot circuit for receiving R-data signals of the first video signals from said OSD generating section, for storing in a position-converting manner a write address of the R-data signals in correspondence with a pre-set pivot write address in response to the pivot control signals, and for converting the write address in response to the

horizontal/vertical synchronizing signals and the clock signals so as to output the stored R-data signals in a form of R-data signals of the second video signals;

a G-pivot circuit for receiving G-data signals of the first video signals from said OSD generating section, for storing in a position-converting manner a write address of the G-data signals in correspondence with the pre-set pivot write address in response to the pivot control signals, and for converting the write address in response to the horizontal/vertical synchronizing signals and the clock signals so as to output the stored G-data signals in a form of G-data signals of the second video signals; and

a B-pivot circuit for receiving B-data signals of the first video signals from said OSD generating section, for storing in a position-converting manner a write address of the B-data signals in correspondence with the pre-set pivot write address in response to the pivot control signals, and for converting the write address in response to the horizontal/vertical synchronizing signals and the clock signals so as to output the stored B-data signals in a form of B-data signals of the second video signals.

Claim 3 (original): The video display apparatus as claimed in claim 2, wherein each of said R, G, and B pivot circuits comprises:

an analog/digital converting section for receiving relevant picture data signals of R, G and B data signals, respectively, of the first video signals from said OSD generating section so as to convert them to digital signals;

a buffering section for receiving and storing the picture data signals from said analog/digital converting section, and for outputting previous picture data signals upon receiving next picture data signals from said analog/digital converting section;

a pivot controller for outputting storing position control signals and data selection control signals in response to the pivot control signals of said control section;

a data storing section for receiving and storing the picture data signals of said buffering section, and for storing in a position-converting manner a write address of the picture data signals of said buffering section in correspondence with the pre-set pivot write address in response to the storing position control signals; and

a data selector for receiving one of the picture data signals of the first video signals and the picture data signals of said data storing section, and for outputting said

one of the picture data signals of the first video signals and the picture data signals of said data storing section in a form of second video signals.

Claim 4 (original): The video display apparatus as claimed in claim 3, wherein said buffering section comprises eight buffers for storing 8-bit picture data signals from said analog/digital converting section.

Claim 5 (original): A video display apparatus with an on-screen display pivoting function, comprising:

- a power supply section for supplying power;
- a display section for receiving the power from said power supply section, and for displaying a picture of externally inputted video signals to a user;
- a signal converter/clock generator section for receiving horizontal/vertical synchronizing signals and video signals, for converting the video signals to first digital signals in response to first control signals, and for generating clock signals;
- a decoder for receiving brightness/chromatic signals, and for converting the brightness/chromatic signals to second digital signals in response to second control signals;
- a frame rate converter section for receiving the horizontal/vertical synchronizing signals and the video signals from said signal converting/clock generator section, for receiving the brightness/chromatic signals from said decoder, for storing the video signals in response to third control signals, and for converting the stored video signals so as to have a certain frequency ratio in correspondence with display characteristics of the display section;
- an on-screen display (OSD) generating section for receiving the horizontal/vertical synchronizing signals and the clock signals, and for outputting first video signals in response to OSD control signals;
- a pivot circuit section for receiving the first video signals, for storing in a position-converting manner a write address of the first video signals in correspondence with a pre-set pivot write address, and for converting the write address in response to the

horizontal/vertical synchronizing signals and the clock signals so as to output the first video signals in the form of second video signals;

a scale converting section for furnishing the horizontal/vertical synchronizing signals and the clock signals to said OSD generating section and said pivot circuit section, respectively, for converting scales of video signals of said frame rate converting section, and for receiving the second video signals so as to convert scales of the second video signals of said pivot circuit section in response to scale control signals;

a control section for furnishing the first, second and third control signals to said signal converting/clock generating section, said decoder and said frame rate converting section, respectively, for furnishing the OSD control signals and the scale control signals to said OSD generating section and said scale converting section, respectively, in response to OSD driving signals, and for furnishing pivot control signals to said pivot circuit section in response to mode control signals; and

a driving section for furnishing video signals and driving signals from said scale converting section to said display section.

Claim 6 (original): The video display apparatus as claimed in claim 5, wherein said pivot circuit section comprises:

an R-pivot circuit for receiving R-data signals of the first video signals from said OSD generating section, for storing in a position-converting manner a write address of the R-data signals in correspondence with a pre-set pivot write address in response to the pivot control signals, and for converting the write address in response to the horizontal/vertical synchronizing signals and the clock signals so as to output the stored R-data signals in a form of R-data signals of the second video signals;

a G-pivot circuit for receiving G-data signals of the first video signals from said OSD generating section, for storing in a position-converting manner a write address of the G-data signals in correspondence with the pre-set pivot write address in response to the pivot control signals, and for converting the write address in response to the horizontal/vertical synchronizing signals and the clock signals so as to output the stored G-data signals in a form of G-data signals of the second video signals; and

a B-pivot circuit for receiving B-data signals of the first video signals from said OSD generating section, for storing in a position-converting manner a write address of the B-data signals in correspondence with the pre-set pivot write address in response to the pivot control signals, and for converting the write address in response to the horizontal/vertical synchronizing signals and the clock signals so as to output the stored B-data signals in a form of B-data signals of the second video signals.

Claim 7 (original): The video display apparatus as claimed in claim 6, wherein each of said R, G and B pivot circuits comprises:

- an analog/digital converting section for receiving relevant picture data signals of the R, G and B data signals, respectively, of the first video signals from said OSD generating section so as to convert them to digital signals;

- a buffering section for receiving and storing the picture data signals from said analog/digital converting section, and for outputting previous picture data signals upon receiving next picture data signals from said analog/digital converting section;

- a pivot controller for outputting storing position control signals and data selection control signals in response to the pivot control signals of said control section;

- a data storing section for receiving and storing the picture data signals of said buffering section, and for storing in a position-converting manner a write address of the picture data signals of said buffering section in correspondence with a pre-set pivot write address in response to store position control signals; and

- a data selector for receiving one of the picture data signals of the first video signals and the picture data signals of said data storing section, and for outputting said one of the picture data signals of the first video signals and the picture data signals of said data storing section in a form of second video signals.

Claim 8 (original): The video display apparatus as claimed in claim 7, wherein said buffering section comprises eight buffers for storing 8-bit picture data signals from said analog/digital converting section.

Claim 9 (original): The video display apparatus as claimed in claim 5, wherein said frame rate converter section comprises:

a frame memory for storing the digital video signals from said signal converter/clock generator section in response to control inputs; and
a frame rate converter for writing the output video signals of said signal converter/clock generator section into said frame memory, and for reading out the video signals written into said frame memory so as to convert the video signals to have a certain frequency ratio in correspondence with display characteristics of said display section.

Claim 10 (original): The video display apparatus as claimed in claim 9, wherein said frame rate converter generates said control inputs and provides said control input to said frame memory.

Claim 11 (original): The video display apparatus as claimed in claim 5, wherein said OSD driving signals are generated by the user.

Claim 12 (original): The video display apparatus as claimed in claim 5, wherein said mode control signals are generated by the user.

Claim 13 (original): A video display apparatus having an on-screen display pivoting function, comprising:

on-screen display (OSD) generating means for outputting first video signals having a write address in response to OSD signals;

pivot circuit means for receiving the first video signals, for converting the write address of the first video signals, and for outputting the first video signal in the form of second video signals having scales;

scale converting means for receiving the second video signals, and for converting the scales of the second video signals in response to scale control signals; and

control means for furnishing the OSD control signals and the scale control signals to said OSD generating means and said scale converting means, respectively, in response to OSD driving signals generated by a user input.

Claim 14 (original): The video display apparatus as claimed in claim 13, wherein said pivot circuit means comprises:

- an R-pivot circuit for receiving R-data signals of the first video signals from said OSD generating means, for storing a write address of the R-data signals in response to pivot control signals generated by said control means, and for converting the write address so as to output the R-data signals in a form of R-data signals of the second video signals;

- a G-pivot circuit for receiving G-data signals of the first video signals from said OSD generating means and for converting the write address so as to output the stored G-data signals in a form of G-data signals of the second video signals; and

- a B-pivot circuit for receiving B-data signals of the first video signals from said OSD generating means and for converting the write address so as to output the stored B-data signals in a form of B-data signals of the second video signals.

Claim 15 (original): The video display apparatus as claimed in claim 14, wherein each of said R, G and B pivot circuits comprises:

- an analog/digital converting section for receiving relevant picture data signals of R, G and B data signals, respectively, of the first video signals from said OSD generating means so as to convert them to digital signals;

- a buffering section for receiving and storing the picture data signals from said analog/digital converting section, and for outputting previous picture data signals upon receiving next picture data signals from said analog/digital converting section;

- a pivot controller for outputting storing position control signals and data selection control signals in response to pivot control signals from said control means;

- a data storing section for receiving and storing the picture data signals of said buffering section, and for storing a write address of the picture data signals of said buffering section in response to the storing position control signals; and

- a data selector for receiving one of the picture data signals of the first video signals and the picture data signals of said data storing section, and for outputting said

one of the picture data signals of the first video signals and the picture data signals of said data storing section in a form of second video signals.

Claim 16 (original): The video display apparatus as claimed in claim 15, wherein said buffering section comprises eight buffers for storing 8-bit picture data signals from said analog/digital converting section.

Claim 17 (original): The video display apparatus as claimed in claim 13, further comprising:

signal converting/clock generating means for receiving horizontal/vertical synchronizing signals and video signals, for converting the video signals to first digital signals in response to first control signals from said control means, and for generating clock signals.

Claim 18 (original): The video display apparatus as claimed in claim 17, further comprising:

decoder means for receiving brightness/chromatic signals, and for converting the brightness/chromatic signal to second digital signals in response to second control signals from said control means.

Claim 19 (original): The video display apparatus as claimed in claim 18, further comprising:

frame rate converting means for receiving the horizontal/vertical synchronizing signals and the first video signals from said signal converting/clock generating means, for receiving the brightness/chromatic signals from said decoder means, for storing the first video signals in response to third control signals from said control means, and for converting the stored first video signals so as to have a certain frequency ratio in correspondence with display characteristics of a display section.

Claim 20 (new): A method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body, the method comprising:

generating a mode signal indicating a rotated state of the screen body; and
displaying the OSD at a rotated position in accordance with the mode signal.

Claim 21 (new). The method as claimed in claim 20, wherein the mode signal is generated in accordance with a user input indicating the rotated state of the screen body.

Claim 22 (new). The method as claimed in claim 21, wherein the user input is made by a direct key selection.

Claim 23 (new). The method as claimed in claim 20, further comprising:
rotating the OSD in accordance with the mode signal.

Claim 24 (new). The method as claimed in claim 23, wherein the mode signal is generated in accordance with a user input indicating the rotated state of the screen body.

Claim 25 (new). The method as claimed in claim 23, wherein the user input is made by a direct key selection.

Claim 26 (new). The method as claimed in claim 23, wherein the OSD rotating operation comprises reordering read sequence of the OSD data which is stored in a data memory.

Claim 27 (new). The method as claimed in claim 26, wherein the reordering operation is made to form characters and/or symbols represented by the OSD data in a perpendicularly rotated manner.

Claim 28 (new). The method as claimed in claim 23, wherein the OSD rotating operation comprises reordering read addresses of the OSD data which is stored in a data memory.

Claim 29 (new). The method as claimed in claim 28, wherein the reordering operation is made to form characters and/or symbols represented by the OSD data in a perpendicularly rotated manner.

Claim 30 (new). The method as claimed in claim 20, wherein the displaying operation comprises:

- reading OSD data contained in the OSD as first OSD data; and
- modifying the first OSD data as second OSD data according to the generated mode signal.

Claim 31 (new). The method as claimed in claim 30, wherein the modifying operation comprises:

- storing a write address of the first OSD data in a predetermined format that corresponds to the rotated position of the screen body.

Claim 32 (new). The method as claimed in claim 20, wherein the generating operation comprises:

- activating a key located on the rotatable screen body.

Claim 33 (new). A method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body, the method comprising:

- generating a mode control signal to indicate a desired display position of the OSD on the rotatable screen body; and
- displaying the OSD at the desired display position on the rotatable screen body according to the generated mode control signal.

Claim 34 (new). A method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen body, the method comprising:

- receiving a mode control signal indicating a rotated state of the screen when the screen is rotated;

modifying OSD data corresponding to the OSD with respect to the position of the rotatable screen according to the mode control signals; and
displaying the modified OSD data on the rotatable screen.

Claim 35 (new). A video display apparatus having a screen body to display an on- screen display (OSD), comprising:
a controller to generate a mode signal indicating a rotated state of the screen body;
and
a circuit unit to display the OSD at a rotated position in accordance with the mode signal.

Claim 36 (new). A video display apparatus having a rotatable screen to display an on-screen display (OSD), comprising:
a control unit to generate a mode control signal to indicate a desired display position of the OSD on the rotatable screen body; and
a circuit to display the OSD at the desired display position on the rotatable screen body according to the generated mode control signal.

Claim 37 (new). The video display apparatus as claimed in claim 36, wherein the circuit comprises:
a reading unit to read OSD data contained in the OSD as first OSD data; and
a modifying unit to modify the first OSD data as second OSD data according to the generated mode signal.

Claim 38 (new). The video display apparatus as claimed in claim 37, wherein the circuit comprises:
a storing unit storing a write address of the first OSD data in a predetermined format that corresponds to the rotated position of the screen body.

Claim 39 (new). A video display apparatus having a rotatable screen to display an on-screen display (OSD), comprising:

a mode control signal receiving unit to receive a mode control signal indicating a rotated state of the screen when the screen is rotated;

a circuit unit to modify OSD data corresponding to the OSD with respect to the rotatable screen according to the mode control signal; and

an on-screen display unit to display the modified OSD data.

Claim 40 (new). A method of displaying an on-screen display (OSD) in a video display apparatus having a rotatable screen, the method comprising:

receiving a mode control signal indicating an angle at which the screen is rotated;

modifying OSD data corresponding to the OSD with respect to the angle of rotation of the screen according to the mode control signals; and

displaying the modified OSD data on the rotated screen.

Claim 41 (new). The method as claimed in claim 40, wherein the angle of rotation of the screen is obtained by rotating the screen in the clockwise or counterclockwise directions.

Claim 42 (new). A method of generating an OSD to be displayed on a screen body of a display apparatus, the method comprising:

modifying the OSD; and

selectively generating one of the OSD and the modified OSD according to a signal representing a rotation state of the screen body.

Claim 43 (new). The method as claimed in claim 42, further comprising:

displaying the modified OSD on the screen body according to the signal representing the rotation state of the screen body.

Claim 44 (new). The method as claimed in claim 42, wherein the modifying operation comprises:

reading first data corresponding to the OSD in a predetermined manner to generate second data corresponding to the modified OSD.

Claim 45 (new). An apparatus generating an OSD to be displayed on a screen body of a display apparatus, comprising:

a circuit unit to modify the OSD and selectively generate one of the OSD and the modified OSD according to a signal representing a rotation state of the screen body.

Claim 46 (new). The apparatus as claimed in claim 45, wherein the circuit unit reads first data corresponding to the OSD in a predetermined manner to generate second data corresponding to the modified OSD.